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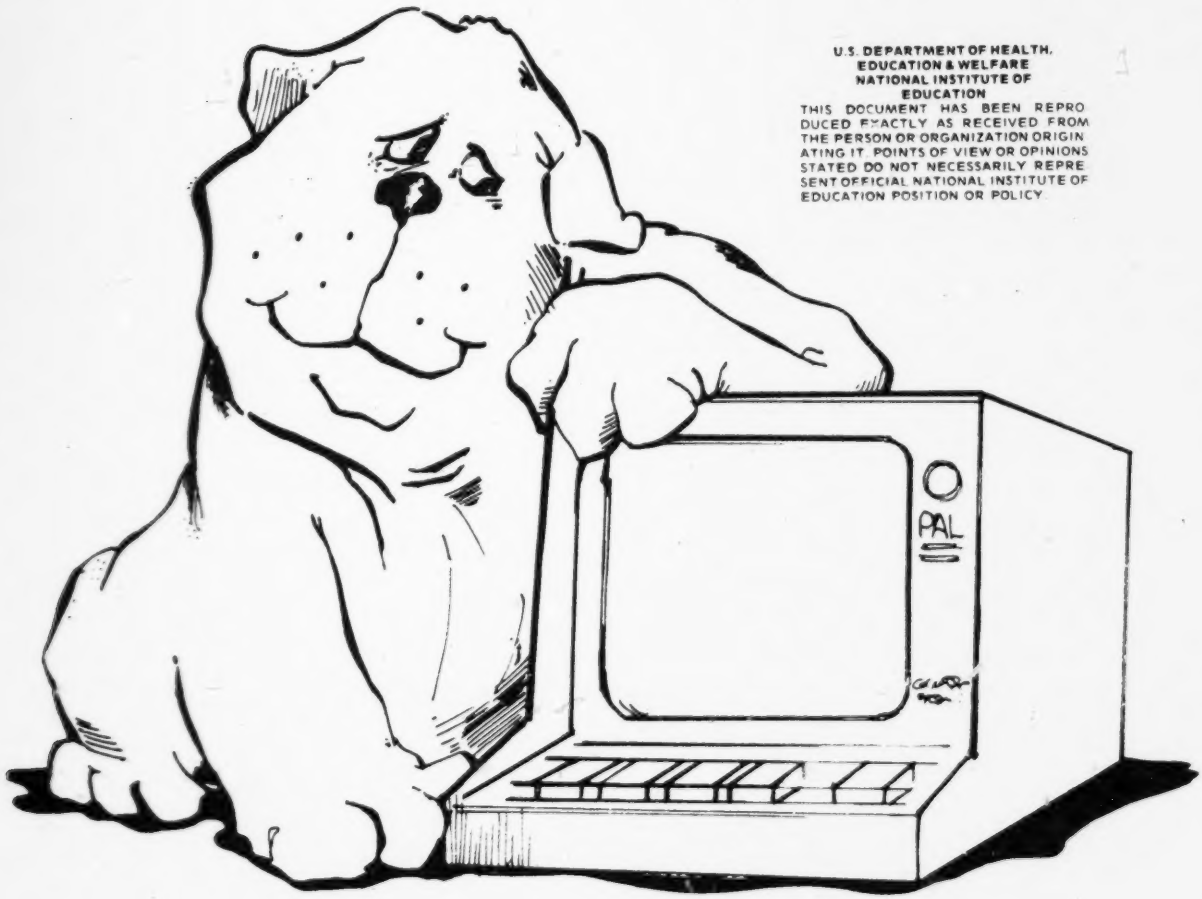
ABSTRACT

Presented is the annual (contract year 1972-73) report of Project LIFE (Language Improvement to Facilitate Education), a program to develop an instructional system to assist handicapped preschool and elementary aged children to acquire a functional language system. The prime teaching modality of the program is explained to be the filmstrip which is used in conjunction with an interaction device called the Student Response Program Master. The report is organized into 15 strategies with progress reported under each strategy by quarters of the fiscal year. The following strategies are covered: programed language filmstrips and holiday supplements; reading comprehension filmstrips; language stimulation and divergent thinking filmstrips; the Callier filmstrip series; Spirit-Master/Transparency manuals; the story booklet series; development of a teacher's guide for the Project LIFE software and hardware components; supplemental activities packages; audiovisual presentation on Project LIFE; transformational grammar filmstrips; three service and administrative strategies; programming, art, and production experimentation; and revision of field tested supplemental printed materials. Summarized is progress of the LIFE research department. Listed are significant meetings attended by staff members during the year, and reviewed is the marketing progress of Project LIFE materials by General Electric Company. (DB)

# Project LIFE

# ANNUAL REPORT

ED 085984

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## September 1, 1972 - August 31, 1973

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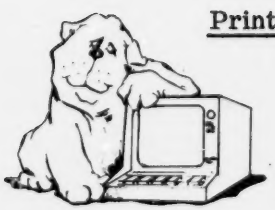

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# ANNUAL REPORT

September 1, 1972 - August 31, 1973

Phase III - Eighth Year
Project LIFE - Language Improvement to
Facilitate Education

Sponsor
Media Services and Captioned Films
Division of Educational Services
Bureau of Education for the Handicapped
United States Office of Education

National Foundation for the Improvement
of Education

October, 1973

# PROJECT LIFE

Conducted Under
OFFICE OF EDUCATION CONTRACT NO. OEC-0-73-0608
U.S. Department of Health, Education, and Welfare
Washington, D.C.

By Authority of

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Media Services and Captioned Films
U.S. Office of Education

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National Foundation for the Improvement
of Education
(NFIE--A non-profit tax-exempt foundation
established by the National Education Association)

Dr. Glenn S. Pfau, Project Director

October, 1973

## CONTRACT AND PURPOSE

Herein is the annual report for Project LIFE of the National Foundation for the Improvement of Education (NFIE) for the contract year beginning September 1, 1972, and extending through August 31, 1973. NFIE administers Project LIFE under Contract No. OEC-0-73-0608. NFIE is an independent non-profit tax-exempt foundation created by the National Education Association and headquartered at 1156 Fifteenth Street, N.W. (Suite 918), Washington, D.C. 20005.

Project LIFE--Language Improvement to Facilitate Education--is sponsored by Media Services and Captioned Films, Bureau of Education for the Handicapped, U.S. Office of Education. The Project's initial funding from USOE began in June, 1963. Thus, this is the tenth annual report submitted by Project LIFE.

Project LIFE is developing an instructional system that is designed to assist language handicapped children to acquire a functional language system. The three major instructional areas are: perceptual training, perceptual/thinking activities, and language/reading. The prime teaching modality is the filmstrip and it is used in conjunction with an interaction devise called the Student Response Program Master. All LIFE instructional materials as well as the accompanying equipment is commercially distributed by the General Electric Company through their independent affiliate, Instructional Industries Inc., Executive Park, Ballston Lake, New York, 12019.

Project LIFE, in addition to developing programmed filmstrips, is simultaneously constructing other support materials to the system. These include: story books, single-concept pictionaries, filmstrip series for reading experience, workbooks, and other related software. Simultaneously, the General Electric Company through their independent affiliate is developing new compatible hardware.

For Fiscal '73, fifteen (15) strategies were established for Project LIFE. Each strategy was viewed as a necessary component to the ever-expanding instructional program. The report herein identifies each of the strategies and provides a discussion of the progress made on each strategy during each quarter of the contract year.

## LIFE SYSTEMS DEVELOPMENT STRATEGIES

The Project LIFE proposal for Fiscal '73 included fifteen (15) strategies. These strategies related to both material development and services rendered. This report covers the progress made on each of the strategies during the contract year beginning September 1, 1972, and ending August 31, 1973.

Strategy 1 (A)

Programmed Language filmstrips: Design, develop, and release Language Level IVA, Sets 25-28 (32 filmstrips).

Quarter 1--During this period, the Systems Development Department completed the design of Sets 25 and 26. In addition, sections A and B of Sets 27 and 28 were planned. Art, production, and developmental testing were completed for 25A, B, and D. Art was nearing completion for 25C, E, F, and 26A. Art work was begun on Story Supplement No. 25 and 26B.

Quarter 2--During the second quarter, the development, testing, revision, and photography of filmstrips were completed for all filmstrips in Sets 25 and 26. They were released to Lopatin Productions, Inc., for duplication, field testing release and commercial dissemination.

In addition, Sections C, D, and E of Sets 27 and 28 were programmed. Sections A and B of both sets were prepared in art and developmentally tested.

Quarter 3--Programming was completed for all remaining sections in Sets 27 and 28. Each set included six teaching sections (A-F), a test section (G), and a story supplement (S.S.). In preparation for developmental testing, the art and production work was completed for Sections C, D, E, F, and the story supplement of Set 27, and C, D, and E of Set 28. As a result of testing, final revisions/modifications were made and all of Set 27 was ready for final filmstrip photography. In addition, Sections A-E of Set 28 were readied for filmstrip photography.

Quarter 4--Strategy 1 (A) was completed during this quarter. Section F, the story supplement, and the test filmstrips were completed in art and production and made ready for photography. All of the filmstrips in Sets 27 and 28 were photographed and approved for distribution.

Strategy 1 (B)

Programmed Holiday Supplements: Field evaluation of Level I Holiday Supplements. Design, develop, and release Level II Holiday Supplements (5 filmstrips).

Quarter 1--Holiday Supplements Level I were released to field test centers during the month of September. Evaluation of these filmstrips will be made during the 1972-3 academic year.

During this reporting period the Level II Holiday Supplements were completed in all aspects of art, production, developmental testing and final revisions were made for filmstrip release. The filmstrips were released for duplication and distribution to the field test centers in February.

Quarter 2--The Project LIFE administration, as a result of feedback from the field test centers, and from input from consultants, decided to move the Level III Holiday Supplements from the 1973-74 fiscal year strategies to include them in the present contract year. This decision enables Project LIFE to complete the basic filmstrip components of the first three levels of programmed language/reading materials. Design, programming, production layout, and art was begun on the Holidays III filmstrips. The filmstrips will include Labor Day, Veterans Day, Martin Luther King, Jr., George Washington, Abraham Lincoln, and Memorial Day.

Quarter 3--All planning, design and programming were completed for the Holiday III Supplements. Art, production, and testing were completed for Washington's Birthday, Veterans Day and Labor Day. In early June, Lincoln's Birthday, Martin Luther King, Jr., and Memorial Day will be ready for developmental testing.

Quarter 4--Final production, developmental testing, and revisions were completed on Holidays III. The original strategy did not include Holidays III but only included the five filmstrips in Holidays II.

Strategy 2

Reading Comprehension Filmstrips: Plan, develop, and release Levels I-III (24 filmstrips).

Quarter I--The Reading Comprehension Series is designed to utilize the art work which was prepared for the story supplements of language Sets 1-26. Four sets of the visuals were prepared on slides and were provided to schools in the Washington, D.C. metropolitan area. The students from several fourth and fifth grade classes wrote stories to accompany the visuals. These stories were then studied for sentence complexity and type of vocabulary used. The result of this student feedback served as the bases for preparing appropriate language structure and vocabulary to accompany the visuals of the story supplements.

The LIFE Instructional Material Specialists have completed the initial writing of stories No. 5-14. Type was set on six of these and two of the programs were prepared in slide format for field evaluation. The evaluation, to take place during the subsequent quarter, shall include an assessment of format, type size, story line, and level of difficulty. It is anticipated that the language and vocabulary will be analyzed for reading level prior to the time that they are prepared in final filmstrip format.

Quarter 2--During the second quarter of this fiscal year the two stories in slides were sent along with evaluation forms to ten schools and classes for evaluation. These evaluation forms were returned in February and the data has been compiled from them. The Instructional Material Specialists completed the writing of 22 of 26

stories. The 22 stories were sent to the Computer Based Project in Syracuse, New York for analysis of the vocabulary in comparison to the Functional Basic Word List for Special Pupils. The four remaining stories shall be completed during the first of March and forwarded to the Computer Based Project for analysis. When all of the analyses are completed, the stories will be ranked according to level of difficulty. Teachers guide books will be prepared to accompany the filmstrips.

Project LIFE has decided to call the reading series "Project LIFE Storyland." The series may extend to 26 filmstrips, but art and production difficulties may limit it to the original 24 proposed.

Quarter 3--Project LIFE "Storyland" was extended to comprise 28 filmstrips, of which five stories were written during the third quarter, bringing the total number of stories written to 27. Upon the completion of the artwork for Story Supplement 28, the final story will be written during the early part of the fourth quarter. Each filmstrip contains approximately 30 frames, rather than the 24 frames which were originally projected.

Additional analyses were initiated during this quarter to determine story reading level and hierarchy. In addition to the vocabulary analysis (See Quarter 2) sentence length, and average number of words per frame were computed. Study questions to be included in the Teachers Guide Book were also prepared for several of the stories during the quarter. At the end of the third quarter, 15 of the stories were reviewed and had questions written for them.

The Production Department had completed the type-setting and overlays for the 27 stories. During the subsequent quarter, Story 28 will be completed and art touch-up will be completed on all stories. Final filmstrip photography is scheduled for July.

Quarter 4--During this quarter the final writing for Story 28 was completed. All materials for the "Project LIFE Storyland" were reviewed, photographed, and released for distribution.

Analysis was completed on the vocabulary and reading level of the Series. The filmstrips were ranked from the lowest reading level to the highest reading level. The reading level ranged from grade 2.5 to 4.5. A teachers guide was drafted and was comprised of the captions from each filmstrip, reading level and cross-reference, and ten comprehension questions for each strip. The ten questions were divided into five areas; main idea, inferences, sequencing, cause and effect, and detail.

Plans were made for a second reading comprehension filmstrip series. It will be entitled "Holidayland" and will include 21 filmstrips. The Series will be written at approximately the third grade reading level. Story lines were completed for nine of the filmstrips: Fourth of July, Labor Day, Columbus Day, Flag Day, New Year's Day, Memorial Day, Dominion Day, Veteran's Day, and Halloween. Production completed the layout and overlays for five of the programs. It is projected that the entire Series will be released in early 1974.

Strategy 3

Language Stimulation and Divergent Thinking Filmstrips: Design, develop, and release Levels I-III (24 filmstrips and an accompanying teachers manual).

Quarter 1--A preliminary investigation of non-captioned filmstrips for language stimulation was undertaken during the quarter. A "Daylight Projection" technique for blackboard projection was utilized with the visuals from Story Supplement No. 3. The feedback from the Project LIFE field test centers indicated that the sequences should be shorter rather than the projected 30 frames per filmstrip. Thus, a set of guidelines was established for the first eight filmstrips. The specific guidelines established were as follows: each filmstrip shall contain five sequences of pictures, with each sequence consisting of approximately six frames and followed by a frame with suggested logical questions for use by the teacher; each filmstrip should employ a specific question format, such as "What happened next?", "What would you do?", "How do you think they felt?", and the like. During this quarter, eight prototypical designs were completed for field evaluation during the subsequent quarter.

Quarter 2--One of the designs was selected with each of the five internal sequences being prepared in a different artistic procedure. These will be shot on slides and sent to ten field test centers for evaluation to compare the standard projection methods with that of the Daylight Projection technique. At the conclusion of this evaluation a decision will be made as to whether to limit the number of materials and use the Daylight Projection technique or to prepare the full complement of materials using standard filmstrip format techniques.

Quarter 3--The further development of Strategy 3 was delayed during the present quarter so that a 100% effort could be given to realize the completion of Strategy 1 (A and B). Final developmental testing on Strategy 1 had to be completed no later than June 15. Consequently, no further action was taken on Strategy 3 during this quarter.

Quarter 4--The internal sequences were prepared and photographed on slides for evaluation. It is projected that these programs will be sent to at least ten field test centers for external evaluation. A GO/NO-GO decision will be made to complete this strategy based on the information provided from the evaluation during the early part of Fiscal '74. From the initial internal evaluation, it appears that the need for such materials is not substantial to deem the completion of this strategy.

Strategy 4

Callier Filmstrip Series: Revise the series, employing feedback from the field; release through commercial distributor if validation results indicate the component is worthwhile (10 filmstrips).

Quarter 1--The ten programs were field tested during the latter part of the 1971-72 academic year. During the present quarter, the results of the validation testing were

being evaluated. No decision was made during the quarter regarding recommended revisions, status, or future implementation.

Quarter 2--No additional action taken.

Quarter 3--During the third quarter, additional analyses were made of the validation testing results. It has been found that many of the programming concepts are somewhat confusing, as are many of the illustrations. Both teachers and children indicated that significant modifications were needed prior to their commercial release. A final decision will be reached during the fourth quarter regarding the feasibility of modifying the Callier filmstrips.

Quarter 4--Analysis was completed on the validation testing data and the external evaluaters. The consensus was that the ten filmstrips would require significant modifications to the objectives, programming techniques, art, and production prior to meeting the rigid standards for commercial release established by Project LIFE. In addition, it is highly probable that there would be little consistency and correlation to the LIFE filmstrips. A decision was made therefore to place a tentative hold on the materials until it was determined that such a component was needed to enhance the GE/LIFE Program. At such time, the ten filmstrips would be reanalyzed and any salient features of the existing materials would be salvaged.

Strategy 5

Spirit-Master/Transparency Manuals: Plan, develop, and release Transparency Manuals Levels 1-3.

Quarter 1--No action.

Quarter 2--No additional action taken.

Quarter 3--Spirit master prototypes were developed for Language Level I, II, III. These were internally evaluated by different departments of the Project LIFE organization, as well as by outside consultants. A key consultant on this strategy, Boris Mlawer, met with members of the Systems Development Department to discuss alternative designs and production considerations. Mr. Mlawer is the Director of a production department for Simon and Schuster, New York City.

As a result of the internal and external evaluation of the prototypes, a master plan for the books was prepared. It was decided that there should be two books of 30 spirit masters each for each of the first three language levels (Sets 1-8, 9-16, and 17-24). Of the 30 masters, each book will have approximately 23 practice papers, 2 review pages, 2 "fun" pages, 2 evaluation pages, and a completion certificate.

During this quarter, the first two books were conceptually designed. During the subsequent quarter, the four remaining books will be written, production and art will

be prepared, and copies will be duplicated in-house to be sent to the regional media centers for the deaf for evaluation in their summer institutes. Additional evaluation feedback will be obtained. As a result of the return data, revision will be made and the six books will be released to the General Electric Company for commercial dissemination.

Quarter 4--The first two books were produced in a field test format for field evaluation. Of the 200 copies that were produced, 174 were returned by the evaluaters. A page-by-page analysis was completed with final recommendations made for modifications to the first two books and content/format of the other four books.

In an administrative meeting with the General Electric Company in Schenectady, New York, a decision was made to have the six books commercially distributed in a workbook rather than a spirit master form. The primary reason for the change of this strategy to workbooks was the estimated cost of printing the spirit masters versus the cost of printing the workbooks. It was anticipated that most schools would only purchase a single spirit master book, whereas the same school may purchase scores of workbooks.

Strategy 6

Story Booklet Series: Design and develop twenty-four story booklets to accompany language Sets 5-28.

Quarter 1--During the latter part of the 1972 fiscal year, the first four story booklets to accompany Sets 1-4 were written and designed by Project LIFE. The General Electric Company had them developed into final form (press-ready), duplicated, and is now marketing them on a trial basis. It is anticipated that GE will concur with the Project LIFE recommendation that the entire series be produced. The production cost for each booklet, to make them press-ready, is approximately $1500.00 per book. The LIFE Instructional Materials Specialists will complete the writing of the twenty-four stories during the present contract year. Stories No. 5 and 7 were completed during the first quarter. Six additional stories are projected to be written during the subsequent quarter.

Quarter 2--No action.

Quarter 3--The General Electric Company produced five thousand copies of each of the first four story booklets. Sales of this media component have been very light to date. Consequently, both Project LIFE and GE are moving cautiously in this area of additional booklet development. LIFE does not wish to expend a considerable amount of story writing and preparation time until more feedback is received regarding the viability of this supplement.

During this quarter, however, the evaluation report was completed for the first four story booklets. Teachers rated the concept, format, style, and educational value to be very high. In addition, the field feedback indicated that the vocabulary and language levels were appropriate to the LIFE system.

Quarter 4--The line drawings and stories to accompany Language/Reading Sets 5-8 were completed during this quarter. Both Project LIFE and the General Electric Company made contact with the Young Readers' Press. There is a good possibility that a joint agreement will be reached between GE and the Young Readers' Press for the development of story books 5-28. The final disposition of this strategy will be worked out between GE and the Young Readers' Press during Fiscal '74.

Strategy 7

Development of a Teacher's Guide for the Project LIFE Software and Hardware Components:

Quarter 1--During the present quarter, the strategy was studied to determine what components--software and hardware--should be included in the manual. It was determined that an attractive loose-leaf binder (three ring) would be optimal. In that way, as new components are developed, a descriptive brochure could be written that a teacher would insert into a binder. It was further determined that the binder should be rigid and have a visual indexing system for rapid identification and location of information. The Project has been accumulating information that the teachers in the field test centers feel should be included in the guide.

Quarter 2--During this quarter, planning and collection of materials have progressed. Samplings of different possible binders and costs were accumulated and preliminary discussions were held with the General Electric Company on the final binder to be used. In addition, Project LIFE prepared an interim report to be used as a temporary teacher's manual until all of the components are completed for the final version. However, no closure has been reached on the content and distribution of the Teacher's Guide to complete this strategy.

Quarter 3--During this quarter, an extensive (30 pages) draft of a teacher's field manual was prepared by Project LIFE and was submitted to the General Electric Company. It included a discussion of the different components to the LIFE system, the rationale for each component, utilization alternatives, and a discussion of general concepts related to the system. The staff at GE was to react to this draft during the early part of the subsequent quarter, and respond in terms of limits and areas that should be emphasized in the final teacher's guide. Thus, GE will be responsible for preparing a series of guidelines, as well as sharing in the cost, of the final production version. It is anticipated that the guide will be ready for dissemination by August 1, 1973.

Quarter 4--During this quarter, several meetings were held between GE and LIFE to discuss the content, format, scope, distribution procedure, and pricing structure of the Instruction Manual. A first draft of the entire manual was prepared during the quarter, including the development of several relevant pictures, graphs, charts, and figures. The draft of the Manual was approximately 200 pages in length and includes

an introduction, descriptive rationale, hierarchy of materials, operating procedures, and appendices/references.

Strategy 8

Supplemental Activities Packages: Design and develop prototype supplemental activities for Language Level I. Evaluate prototype, produce in final form, and release activity packages to field test centers for validation.

Quarter 1--During this reporting period, concepts were developed for the strategy and were based on the projected need as recommended by the field test centers and the LIFE consultants. During the quarter, a set of Picture Vocabulary Cards to accompany Language Level I was completed in a prototype format. These cards are to be evaluated by the fifty-two field test centers during the subsequent quarter. The cards were constructed with the words printed in red on the front of the card, with the word also being used in a sentence on the bottom of the front side of the card (all words except the stimulus word are printed in black). On the reverse side of the card is a picture that illustrates the word or concept. The cards have a specifically designed indexing system that coordinates them with the appropriate LIFE language sets and sections.

Quarter 2--During this reporting period, the Vocabulary Cards were sent to the field test centers along with four copies of an evaluation form. By the end of the quarter, sixty percent of the evaluation forms were returned to Project LIFE and a preliminary tabulation of the data was prepared. The final evaluation report which will include recommendations will be completed the first of the subsequent quarter. The final development of the Vocabulary for Language Level I and any additional development of Vocabulary Cards will be determined on the basis of the information provided in the evaluation report.

Quarter 3--Evaluation responses were received from eighty-two percent of the field test centers regarding the Vocabulary Cards. The responses varied from teachers being highly enthusiastic to those who felt the cards were unnecessary and of little value. Additional analyses and evaluations are needed before a final determination will be made regarding whether this component will be modified and released for commercial dissemination.

Quarter 4--In addition to the development of prototype vocabulary cards as mentioned in the previous quarter, a survey instrument was developed during the present quarter to determine what additional supplemental components might be included in the GE/LIFE Program. It was decided that the vocabulary cards should not be developed in their field test format; rather, other formats should be designed and tested before a "go" decision be made on this component. It is hoped that the survey instrument will provide specific data regarding teacher's needs of supplemental materials.

Strategy 9

Audiovisual Presentation on Project LIFE: Design, develop, and release an audiovisual presentation describing LIFE.

Quarter 1--The Project LIFE Research Department conducted a poll to assist in determining what type of audiovisual presentation was desired. The requests fell primarily into two categories--(1) a 16 mm movie with sound (maximum--11 minutes) that describes the system and shows exceptual children with different handicaps interacting with the system under varying conditions; (2) a filmstrip/cassette tape of approximately fifty (50) frames in length that describes the system and utilization alternatives. A final decision on which type of presentation should be developed will be made during the subsequent quarter. The presentation(s) would be developed in prototype form during the third quarter, with testing and final production accomplished during the fourth quarter.

Quarter 2--Discussions were held with GE and the Regional Resource Center at the University of Pittsburgh regarding a much broader and more extensive development as a result of a three-way cooperative endeavor. No final decision was reached during this quarter. Project LIFE was awaiting final word on some additional funds from the Office of Education to enable the completion of this strategy.

Quarter 3--Project LIFE conducted several sessions with GE regarding the development of this strategy. Major questions were raised by both parties regarding the specific objectives of such a promotional/information presentation, proposed target population, probable utilization, format, and style. GE and LIFE were to prepare separate guidelines for the strategy for discussion in early June. LIFE will meet with consultants and draw up the final guidelines to prepare the presentation first in prototype and then in final form. It is anticipated that the prototype will be completed by August 1 and the final presentation will be completed by August 31.

Quarter 4--During the fourth quarter, Project LIFE developed a comprehensive audiovisual presentation describing in detail the General Electric/Project LIFE Program. The presentation, comprised of 160 slides and an accompanying sound track, was duplicated by both Project LIFE and the General Electric Company. The presentation runs approximately 20 minutes in length and shows representative samples of all of the Project LIFE materials. The presentation has been well received by all of those who have viewed it.

Strategy 10

Transformational Grammar Filmstrips: Assess the validity and potential value of the transformational grammar filmstrips as produced for Project LIFE under contract with the Oregon State School for the Deaf, Salem.

Quarter 1--No action taken.

Quarter 2--No action taken.

Quarter 3--Preliminary discussions were initiated regarding this strategy during the present quarter. It is anticipated that a final decision will be reached during the subsequent quarter.

Quarter 4--Small sample surveys made by the Project LIFE Research Department during the quarter indicated that very few schools had a sincere interest in the transformational grammar materials as programmed under contract for Project LIFE by personnel at the Oregon State School for the Deaf. Since it was anticipated that Project LIFE would move to Gallaudet College during the subsequent quarter and be in proximity to the Gallaudet Linguistic Laboratory, it was decided to hold on this strategy until linguists in the Laboratory had an opportunity to analyze the materials in detail. It was anticipated that this analysis would occur during the early part of Fiscal '74.

Strategies 11, 12 and 15

Service and Administrative Strategies: The components of these strategies are discussed in other sections of this report.

Strategy 13

Programming, Art, and Production Experimentation: Experiment with various new techniques to increase cost-efficiency in instructional value of media.

Quarter 1--A series of experiments were carried out during this quarter in each of the areas of programming, art, and production. A major experiment included the study of minimal type size that could be employed for the standard slide in filmstrip format, as photographed on the Arabic No. 12 (field size) Oxberry animation stand. The results showed that a type size below Arabic No. 24 point presented many difficulties for many young handicapped children.

Quarter 2--During the present quarter, a series of experimental artistic renditions were developed and photographed on 35mm slides. These slides were evaluated for clarity, meaning, and child-appeal. The series of experiments will assist the Systems Development personnel in developing more meaningful instructional materials in the future.

Quarter 3--During the quarter, the majority of the experimentation centered on alternate production techniques. During May, the Project Director made a trip to The Communicators' Inc., Pomfret Center, Connecticut, to investigate their procedures for developing instructional filmstrips and related materials. The Communicators' Inc. is the largest producer of educational filmstrips in New England. The Project Director toured their design, production, and art departments and discussed their production procedures with their president and vice-president. Among other direct advantages of the trip, LIFE will be incorporating new methods and procedures for storing and retrieving original art used in programs.

Quarter 4--Several experiments were conducted during this quarter to investigate filmstrip print legibility and readability. As a result, a set of definitive guidelines were prepared and distributed to personnel in the LIFE Systems Development Department. Also, research was undertaken to investigate an inexpensive process of polarizing the cameras and lights for sharper and clearer images. After some exploration, some very economical processes were discovered that could positively effect the filmstrip and slide materials. This process will be further refined during the subsequent contract year.

Strategy 14

Revision of Field Tested Supplemental Printed Materials: Revise, produce, and release for field testing a Multiple Meaning Manual for children, a Multiple Meaning Manual for teachers, and the beginning components of the concept dictionary series.

Quarter 1--Concept dictionaries have been designed through the preliminary stages. One of these, My Verb Pictionary, was produced in a final form for field testing. Approximately 225 copies of the Pictionary were duplicated. The pictionary contains 125 verbs, each pictured in the future, present, and past tense with an accompanying descriptive sentence for each verb tense. The pictionary, along with the flash cards and story booklets, will be released to the 52 field test centers for evaluation during the second quarter.

Quarter 2--During this quarter, copies of My Verb Pictionary along with four copies of an evaluation form were sent to the 52 field test centers. In addition, a copy of each of the four story booklets and four evaluation forms were sent to the field test centers. By the end of the quarter, approximately 60% of the evaluation forms were returned to Project LIFE and a preliminary tabulation of the data was prepared. The final evaluation report and subsequent recommendations will be made during the first part of the third quarter. A preliminary analysis of the returned data indicates a very high acceptance of the Pictionary and the story booklets. On their evaluation forms, many teachers in the field test centers stated on their evaluation of My Verb Pictionary that, "This is what we have needed for a long time. How soon will it be available?"

The preliminary design for the Multiple Meaning Manual for children will be critically evaluated during the subsequent quarter. Modifications and revisions of the content shall be made prior to the beginning of any art or production development. In addition, the Multiple Meaning Manual for teachers shall be likewise evaluated and the results of an earlier field test questionnaire shall be carefully studied. Based upon this evaluation, a series of recommendations and an accompanying time line for their production will be established.

Quarter 3--The final evaluation report was prepared for My Verb Pictionary. Based on the report and consultant evaluations, 32 modifications were made to the content. LIFE met with Mr. Boris Mlawer of Simon & Schuster regarding final

printing of the book. The discussions included rationale for revisions and costs associated thereof. Revisions are scheduled to be completed during June and the book is to be printed in final form in July. It will be available to the General Electric Company for commercial dissemination by September 1.

Concerns have been expressed by the legal counsel of the General Electric Company regarding the use of the word "Pictionary". Additional investigation is under way to determine whether others may have some legal claim to the name.

Sample design sheets have been prepared for the Multiple Meaning Manual for Children. A tentative decision has been reached on the format and style, but actual work has been delayed until the subsequent quarter.

Quarter 4--During the quarter, final modifications were made on the Project LIFE verb pictionary. After several discussions with legal counsel at the General Electric Company, it was decided to change the name from My Verb Pictionary to My LIFE Pictionary--Verbs. All of the pictionaries in the series will have the same first three words, with the descriptive word at the end identifying the content. Final blueprints of the press-ready copy is expected during the early part of the subsequent quarter.

The basic outline of My LIFE Pictionary--Multiple Meanings was completed during the present quarter. It was decided that all art and production work would be performed at Project LIFE. This work is scheduled for completion during the first half of Fiscal '74.

## LIFE RESEARCH DEPARTMENT PROGRESS

During Fiscal '73, Project LIFE submitted several proposals to the Bureau of Education for the Handicapped, USOE, to continue the field test operation. A contract was awarded to the National Foundation for the Improvement of Education to operate the LIFE field test centers from June 1, 1973 through May 31, 1974. Thus, the present quarter (June-August, 1973) represents the first quarter of the research fiscal year. The major progress during the quarter is noted below:

1. A call for data for Fiscal '73 was made--the second during the contract year. By the end of the quarter, 85% of the field test centers had responded. Others were contacted by telephone and said that their data would be coming in immediately after school began in the fall. As soon as all data is in and categorized, it will be compiled and evaluated.

2. Analysis was completed on evaluation of the four story booklets. The results of the evaluation were positive and the consensus from the field test centers is that Project LIFE should move forward in the further development of the additional story books so that there may be one book for each set within the first three language levels (Sets 1-24). The books must be developed in concert with the General Electric Company, since there is a considerable amount of developmental expense involved.

3. New data forms were prepared and collated for all of the LIFE materials that have been developed to date or that will be developed during Fiscal '74. These forms were then mailed to all test centers in preparation for the new year of data collection. A considerable amount of time was expended by research personnel in inventorying all of the research equipment and field test materials. The inventory was completed in preparation for the Project LIFE anticipated move to Gallaudet College.

4. The "readability index" was developed in conjunction with the Computer Based Project in Syracuse for the Project LIFE materials. This included the programmed language/reading and the Storyland Reading Series (28 filmstrips). As a result, each filmstrip in the LIFE Program has a reading grade level designation. Samplings from this computer analysis were then compared with the readability levels obtained by using a readability index developed by Edward Fry and George Maginnis. It was found that a very high positive correlation existed; thereafter, a readability analysis was completed on other aspects of the LIFE materials using the Fry formula.

5. The Research Department completed the analysis of the Callier programs developed during the previous year (10 filmstrips). The results of the analysis indicated that though there were some potential advantages for using these materials in the LIFE Program, they needed far too much work before they would become suitable to be part of the system. In addition, it was empirically determined that the materials developed at Callier did not mesh suitably with the existing LIFE materials. Thus, though ideas will be gained from these materials, it was decided that it would be advantageous to develop new filmstrips rather than attempt to modify these existing ones, should it be decided that these components should be added to the GE/LIFE Program.

6. Correspondence was prepared for each of the field test centers and the special projects. This correspondence was mailed so that it would be awaiting the contact person for the LIFE field test centers upon their return to school and prior to the beginning of classes for the students. Correspondence related directly to their past performance and data preparation. It also asked them to insure that the machine and materials remained with the students as they progressed to higher levels and that we did not just get repeat of evaluations of the earlier materials. This was important to insure that there was on-going longitudinal evaluation.

7. A considerable amount of effort was expended in establishing new developmental testing procedures and in contacting different personnel at the Model Secondary School for the Deaf. These contacts, including demonstrations and discussions, were related to the utilization of student testing populations from MSSD to provide the LIFE material designers with specific feedback information from students functioning at higher academic levels. This need was anticipated since LIFE Systems Development is projecting some higher level materials for development during Fiscal '74. The final disposition of this research component will be made in adequate time to insure an adequate testing population of the age and academic ability required.

8. The Research Department worked cooperatively with outside agencies doing independent research on different aspects of the Project LIFE Program. In addition, a considerable amount of research input was provided to an agency which was doing an independent needs analysis projected to demonstrate redundancies or gaps in the LIFE Program. The analysis is projected to be completed by January, 1974; a synopsis of that analysis will be included in the third quarter research report.

9. The research staff corresponded frequently via letter and telephone to several special research projects performing investigations related to Project LIFE. The research included two doctoral dissertations--one at Syracuse University and one at the University of Southern California. Other comprehensive LIFE research-related studies were being conducted at Michigan State University and Ohio State University. Comprehensive reports of these various studies will be provided in future technical progress reports at the conclusion of each investigation.

10. The LIFE Research Department communicated daily with the LIFE Systems Development Department to insure research input to the development of instructional materials. The Research Department critically analyzed every piece of instructional materials during an early phase of programming. Also, a careful review was made of developmental testing results to insure that the optimum programmatic decisions were incorporated. The harmonious paralleling of the two Departments of Project LIFE is considered to be a key variable to the continuing development of high quality instructional materials.

## SUMMARY OF SIGNIFICANT MEETINGS

(June 1, 1973 - August 31, 1973)

| Date | Personnel | Location | Purpose |
|---|---|---|---|
| 6/3-6 | SEIMC/RMC Directors Conference<br>Pfau | CEC Headquarters | Semi-annual Meeting |
| 6/8 | Mr. Carl Hedberg, Computer Image Corp., Denver, LIFE Staff | Project Office | Demonstration of Animated Illustrations using Computerization |
| 6/20 | Mr. Norval Smith, Mrs. Marcia Ryan, The Communicators, Pomfret Center, Connecticut, LIFE Material Design Specialists, Pfau, Spidal | Project Office | Review LIFE Photographic and Production Techniques to determine possible improved alternative strategies |
| | Dr. James W. Becker, NFIE<br>Mr. Hubert Summers, SWRMCD<br>Dostal, Spidal, Pfau | NFIE Central Offices | Discuss potential of LIFE becoming media production arm for RMCD network |
| 6/21 | Dr. Orin Cornett, Gallaudet<br>Summers, Dostal, Pfau, Spidal | Gallaudet College | Discuss potential production role of Project LIFE while residing on Gallaudet College campus |
| 6/22 | Dr. William J.A. Marshall, NCEMMH<br>Teachers of MSSD<br>Spidal | MSSD | Consultative input regarding "Disappearing Signs" project at MSSD in cooperation with NCEMMH |
| 6/24-29 | Mrs. Hilda Williams, Pfau, Spidal | Marott Hotel, Indianapolis, Indiana | Exhibit Project LIFE at the Conference of American Instructors of the Deaf and make a presentation on Project LIFE |

| Date | Personnel | Location | Purpose |
|---|---|---|---|
| 7/11 | Gallaudet College Graduate Summer Workshop Pfau | Gallaudet College | To make a presentation related to the title of the workshop: "Teaching the Deaf Through Programmed Instruction." |
| 7/16-17 | Dr. Bill Jackson, Pfau and Spidal | Project Office | Review of the Project LIFE Instruction Manual |
| 7/17 | Mr. Elwood Bland, BEH and Teachers from the District of Columbia (Miss Brown, Dr. Woodson) LIFE material designers, Pfau and Spidal | Project Office | Analytically review the Martin Luther King Jr. filmstrip |
| 7/20 | Dr. Paul Andereck, Mr. Elwood Bland, Dr. Mac Norwood, BEH, Dr. William J.A. Marshall, NCEMMH and Pfau | BEH Office | Discuss possibility of Project LIFE staff release time to undertake certain activities for MSSD and NCEMMH |
| 7/26-28 | Mr. Paul McLaughlin, Mr. Hal Tately, I.I.I., Dr. William Jackson, SRMCD, Pfau, Spidal and Dostal | Instructional Industries, Inc., Ballston Lake, New York | To conduct semi-annual meeting between Project LIFE and I.I.I.; Review Instruction Manual |
| 7/31 | Mrs. Johnquil Linear, Ms. Sandy Elias, H.J. Detwiler School, Spidal | Project Office | Overview of the General Electric/ Project LIFE Program |
| 8/3 | Dr. Doin Hicks, Director, MSSD, Spidal | MSSD | Discussion of developmental testing of LIFE materials and establishment of model classrooms at MSSD and Kendall |

| Date | Personnel | Location | Purpose |
|---|---|---|---|
| 8/7 | Dr. Ben Schowe, Spidal, Pfau | MSSD | Further discussion of utilization of MSSD students for developmental testing of LIFE materials |
| 8/16 | Miss Lois Lee, Teacher of the Deaf, Virgin Islands, Spidal | Project Office | To provide Miss Lee with a comprehensive overview of the GE/LIFE Program |
| 8/24-25 | Dr. Bill Jackson, SRMCD, Spidal, Pfau | Morganton, North Carolina | Comprehensive review of LIFE Instruction Manual |
| 8/29 | Dr. Frank Withrow, BEH, Spidal | Project Office | Demonstration of some new audio-visual equipment that could provide a ready overview of an instructional program |
| 8/29 | Ms. Marian Gusfield, Leesburg, Virginia | Project Office | Orientation of LIFE Program and loan of LIFE materials/equipment for use with hearing impaired students in an individualized classroom in Leesburg |

## GENERAL ELECTRIC MARKETING PROGRESS

At the end of the present reporting period, the General Electric Company had completed approximately two and one half years of experimental marketing of the Project LIFE materials (distribution began April 16, 1971). This quarter brought an end to the experimental phase of distribution which concluded on August 31, 1973. Since the General Electric Company was the successful bidder on the commercial phase of distribution (September 1, 1973--December 31, 1979), there will be continuity of organizational structure during subsequent distribution.

Marketing efforts continued during the quarter by GE in a variety of ways through their independent affiliate, Instructional Industries, Inc. (I.I.I.). The bulk of the effort was expended in the following areas: (1) Conferences, conventions, and meetings in which the materials and equipment were exhibited; (2) Continued development of the self-contained response unit--PAL System; (3) Contact and personally visit prospective dealers throughout the United States in an effort of establishing a functional dealer network during the fall quarter, 1973; (4) Work with advertising agencies in the development of attractive and meaningful promotional brochures; and (5) Respond to scores of inquiries requesting more information about different aspects of the GE/LIFE Program.

Hardware Orders--During the present quarter, the General Electric Company sold a total of one hundred and fourteen (114) Student Response Program Masters (Mod II). This quantity included forty-six (46) in June, thirty-six (36) in July, and thirty-two (32) in August. The cumulative total of Student Response Program Masters that GE has sold during the duration of their contract is one thousand and six (1006).

Software Orders--As with all previous quarters of commercial distribution, software sales were greater than hardware sales. During the quarter, software sales accounted for 67.3% of total sales, whereas hardware accounted for 32.7% of total sales. During the duration of the contract (April 16, 1971--August 31, 1973), software sales represented 58.6% of total sales whereas hardware reflected 41.4%.

Advertising

| Magazines | Direct Mail |
|---|---|
| Responses--381 | Responses--85 |

Conventions and Conferences

| Month | Conference | Location |
|---|---|---|
| June | CAID | Indianapolis, Indiana |

GE/LIFE Meetings

| Personnel | Location | Date |
|---|---|---|
| P. McLaughlin<br>H. Tately<br>J. Dostal<br>G. Pfau<br>D. Spidal<br>B. Jackson | Instructional Industries, Inc., Ballston Lake, New York | July 26-28 |

PAL System Progress

In accordance with the contract between the National Foundation for the Improvement of Education and the General Electric Company, the PAL System was offered for sale beginning September 1, 1973. The delivery of production units is expected to begin during the subsequent quarter (September 1, 1973--November 30, 1973). It was estimated that the full PAL System production schedule would be in effect before the end of the calendar year with thirty day delivery schedules being met on all orders received on or after December 1, 1973. A detailed report on the PAL System will be provided in the Project LIFE Technical Progress Report for the fall quarter, 1973.